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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,346	06/02/2006	Christian Funke	2400.0420000/VLC/L-Z	5037

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EXAMINER	
BLAKELY III, NELSON CLARENCE	
ART UNIT	PAPER NUMBER
4131	
MAIL DATE	DELIVERY MODE
05/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/581,346	FUNKE ET AL.	
	Examiner	Art Unit	
	NELSON C. BLAKELY III	4131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6 and 7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6 and 7* is/are rejected.

7)☒ Claim(s) *1* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/06/2007 & 06/20/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Application Status

1. Applicant's Amendment filed 04/24/2008 has been received and entered into the present application.

2. Currently amended claims 1-4, 6 and 7 are pending. Claim 5 has been cancelled pursuant to Applicant's Preliminary Amendment, filed 06/02/2006, thus claims 1-4, 6 and 7 are presented for examination.

Election of Species

Applicant's election ***without traverse*** of composition comprising a synergistically effective combination of compounds of the Formula (I), and at least one insecticidally active compound of groups 2 and 3 in the reply filed on 04/24/2008 is acknowledged by the Examiner. However, upon reconsideration of the previous restriction requirement, the Examiner is correctly setting forth the basis for the instant requirement under the lack of unity standard as the instant application is a national stage entry (35 U.S.C. 371) and not a U.S. filing under 35 U.S.C. 111.

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

(a) a single disclosed compound of the Formula (I);

(b) a specific insecticidally active compound of group 2; and/or

(c) a specific insecticidally active compound of group 3.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The claims are deemed to correspond to the species listed above in the following manner:

(a) a single disclosed compound of the Formula (I) of instant claims 1 and 2;
(b) a specific insecticidally active compound of group 2 of instant claims 1 and 3; and/or
(c) a specific insecticidally active compound of group 3 of instant claims 1 and 3.

The following claim(s) are generic: 1-4, 6 and 7.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

An international application should relate to only one invention or, if there is more than one invention, the inclusion of those inventions in one international application is only permitted if all inventions are so linked as to form a single general inventive concept (PCT Rule 13.1). With respect to the species, unity of invention exists only

when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

The claims herein lack unity of invention under PCT Rule 13.1 and 13.2 because a composition comprising a synergistically effective combination of Formula (I) and at least one insecticidally active compound of groups 2 and 3 does not set forth a technical relationship among the claimed inventions. For instance, the instant invention lacks unity in that the group 2 compounds, chlorpyrifos (2-2) and disulfoton (2-5), for example, do not share a technical relationship, such as a common core structure, thus yielding a different synergistic effect in combination with Formula (I). Also, the instant invention lacks unity in that the group 3 compounds, propoxur (3-9) and thiodicarb (3-10), for example, do not share a technical relationship, such as a common core structure, thus yielding a different synergistic effect in combination with Formula (I). Therefore, with the varying structural compositions of the group 2 and 3 compounds, there is not a technical relationship among the claimed inventions.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does

not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

In response to the previous reply from Applicant received 04/24/2008, Applicant made an election ***without traverse*** wherein:

(a) A^1 and A^2 are that of oxygen;

X^1 represents a nitrogen;

R^1, R^2, and R^8 represent a hydrogen;

R^3 and R^4 represent a C_1-C_6-alkyl group, namely $-CH_3$;

R^5 and R^7 represent a halogen, namely chlorine; and

R^9 represents a halogen, namely bromine;

(b) chlorpyrifos; and

(c) methiocarb.

Accordingly, Applicant is required to affirm the election in replying to this instant Office Action.

Claims 1-4, 6 and 7 of the instant application each read on the elected combination, and are hereby presented for examination.

Objections

Claims

Claim 1 is objected to because of the following informalities:

On page 8 between (2-7) and (2-8) of instant claim 1, it appears the term "ad/or" is meant to be "and/or".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lahm *et al*, International Application Serial No. WO 03/015519 A1 (Cited by Applicant), and in view of Brück *et al* U.S. Patent No. 6,576,661, as evidenced by EXTOXNET (Extension Toxicology Network, Toxicology Information Briefs; *Cholinesterase Inhibition*), September, 1993 [online], [retrieved on 2008-05-22]. Retrieved from the Internet <URL: http://extoxnet.orst.edu/tibs/cholines.htm> and Merriam-Webster's Medical Dictionary© [online], Merriam-Webster, Inc., 2002 [retrieved on 2008-05-22]. Retrieved from the Internet: <URL: http://dictionary.reference.com/browse/extender>.

Applicant claims a composition comprising a synergistically effective combination of compounds of Formula (I) whereby:

A^1 and A^2 are that of oxygen;

X^1 represents a nitrogen;

R^1, R^2, and R^8 represent a hydrogen;

R^3 and R^4 represent a C_1-C_6-alkyl group, namely $-CH_3$;

R^5 and R^7 represent a halogen, namely chlorine; and

R^9 represents a halogen, namely bromine;

and at least one insecticidally active compound of groups 2 and 3, namely chlorpyrifos and methiocarb, respectively, in a ratio of 50:1 to 1:50 in instant claims 1-4. Applicant additionally claims a process for preparing pesticides comprising contacting said synergistically effective mixture with extenders and/or surfactants, and a method for controlling animal pests comprising allowing said synergistically effective mixture to act on animal pests and/or their habitat in instant claims 6 and 7.

Lahm *et al* disclose in reference claims 1 and 8 (lines 13 and 14) the elected composition comprising Formula (I) whereby the constituents that correspond to Applicant's:

A^1 and A^2 are also that of oxygen;

X^1 also represents a nitrogen;

R^1, R^2 (reference constituent R^{4b}), and R^8 also represent a hydrogen;

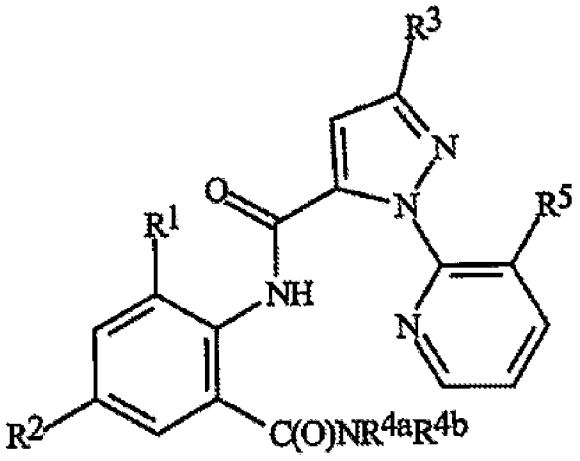
R^3 (reference constituent R^{4a}) and R^4 (reference constituent R^1) also represent a C_1-C_4-alkyl group, namely $-CH_3$;

R^5 (reference constituent R^2) and R^7 (reference constituent R^5) also represent a halogen, namely chlorine; and

R^9 (reference constituent R^3) also represents a halogen, namely bromine.

Below is an excerpt from the claims of prior art reference, listed above, to illustrate that the reference compound taught by Lahm *et al* identically corresponds to Applicant's elected claimed invention:

1. A compound selected from Formula 1 or an *N*-oxide thereof



1

wherein

R^1 is CH_3, F, Cl or Br;

R^2 is F, Cl, Br, I or CF_3;

R^3 is CF_3, Cl, Br or OCH_2CF_3;

R^{4a} is C_1–C_4 alkyl;

R^{4b} is H or CH_3; and

R^5 is Cl or Br;

or an agriculturally suitable salt thereof.

In addition to the elected composition, Lahm *et al* also disclose at least one additional biologically active compound or agent selected from insecticide, nematocide, acaricide or biological agents in the group consisting of chlorpyrifos, for example, in reference claims 1, 8 (lines 13 and 14), 10-13. Lahm *et al* teach the requisite inclusion of at least one additional component selected from the group consisting of surfactants, solid diluents, and liquid diluents according to instant claim 6 in reference claim 9. Lahm *et al* fail to teach the explicit use of "extenders"; however, Merriam-Webster's

Medical Dictionary© defines an “extender” as a substance added to a product especially in the capacity of a *diluent*, adulterant, or modifier. Therefore, Lahm *et al* implicitly teach the incorporation of an “extender” in the reference composition by virtue of the fact that it teaches the use of a diluent. Additionally, in reference claim 15, Lahm *et al* disclose a method for controlling invertebrate pest comprising contacting the invertebrate pest or its environment with a biologically effective amount of said compound as required by instant claim 7.

Lahm *et al* differ in that the inclusion of methiocarb from group 3 is not specifically taught; however, other carbamates disclosed in instant claim 1, such as methomyl and oxamyl are disclosed in reference claim 13. Lahm *et al* also differ in that the amounts of compounds from groups 2 and 3 are not disclosed. Lahm *et al* additionally fail to recite the fact that said combinatorial composition is a "synergistically effective combination”. However, it would be apparent to one of ordinary skill in the art that if a composition comprises the same constituents, said composition, with a reasonable amount of success, it would inherently exhibit the claimed synergistic effects.

Brück *et al* recite an active composition mixture of reference Formula (I) and chlorpyrifos (column 3, A-2 of the reference specification) and/or methiocarb (column 14, C-54 of the reference specification), for example, have very good insecticidal and acaricidal properties in column 1, line 29 through column 21, line 39 of the reference specification. Brück *et al* additionally recite in column 23 of the reference specification, at around lines 13 and 44, that the preferred and especially preferred mixing ratios for

both chlorpyrifos and methiocarb are 10:1 to 1:10 and 5:1 to 1:5, respectively. Therefore, the preferred and especially preferred mixing ratios fall under the genus of 50:1 to 1:50 as recited in instant claim 4.

Brück *et al* fail to disclose the instant Formula (I), but does disclose an active ingredient combination having insecticidal and acaricidal characteristics. This reference serves merely to teach the inclusion of conventional (thio)phosphates and/or carbamates and their respective amounts.

The EXTOXNET reference teaches the importance of cholinesterase in the proper functioning of the nervous system of humans and insects, for example, and that carbamates, for example, work against undesirable "bugs" by inhibiting cholinesterase activity in the section entitled "WHAT IS CHOLINESTERASE?" on page 1. The EXTOXNET reference also teaches that carbamates, such as methiocarb, methomyl, and oxamyl work to inhibit plasma cholinesterase under the section entitled "WHICH PESTICIDES CAN INHIBIT CHOLINESTERASE?" on page 2 of the instant reference. Therefore, since carbamates, such as methiocarb, methomyl, and oxamyl function to inhibit cholinesterase activity, it would be obvious to a skilled artisan to substitute one carbamate for another with a reasonable expectation of success.

Therefore, since Lahm *et al* disclose a composition comprising said elected Formula (I) and at least an additional biologically active compound, namely chlorpyrifos, and other instantly disclosed carbamates, such as methomyl and oxamyl, and Brück *et al* disclose a composition mixture comprising an active insecticidal compound ingredient in combination with chlorpyrifos and/or methiocarb in amounts overlapping those

instantly claimed, for example, a skilled artisan would envisage to at least try another carbamate, such as methiocarb, in place of the methomyl or oxamyl as taught by Lahm et al. with a reasonable expectation of success. It would have been obvious to one of ordinary skill in the art at the time of the invention because the combined teachings of the prior art is fairly suggestive of the claimed invention. Therefore, the instant claims 1-4, 6 and 7 are rendered obvious.

Other Matters

1. Non-Patent Literature references 4 and 5 noted on the Information Disclosure Statement filed 03/06/2007 have not been considered due to lack of publication dates.

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Conclusion

Claim 1 is objected to.

All claims are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NELSON C. BLAKELY III whose telephone number is (571) 270-3290. The examiner can normally be reached on Mon - Thurs, 7:00 am - 5:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. C. B. III/
Examiner, Art Unit 4131

/Ardin Marschel/
Supervisory Patent Examiner, Art Unit 1614